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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,400	05/24/2001	Seung June Yi	HI-035	9193
34610	7590	01/25/2005	EXAMINER	
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ART UNIT		PAPER NUMBER		
		2661		

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/863,400	YI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tri H. Phan	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 August 2001.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 May 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/01/2004.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment/Arguments***

1. This Office Action is in response to the Preliminary Amendment filed on August 6<sup>th</sup>, 2001. Claims 1-12 are now pending in the application.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

3. The corrected or substitute drawing (Figure 7) is received on August 6<sup>th</sup>, 2001. This drawing is acceptable by the Examiner.

The drawings (Figs. 4-6) are objected to because the blocks in Figs. 4-6 are labeled with foreign language descriptive legends. A proposed drawing correction or corrected drawings are required in response to this Office action. However, correction of the noted defect can be deferred until the application is allowed by the examiner.

Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 1 and 11 are objected to because of the following informalities:

In claim 1, line 3, the word "a" in front of the term "eliminating" should be deleted for clarity.

In claim 11, the word "a" (line 5) in front of the term "previous PDU" and in front of the term "last PDU" should be changed to -- the -- for clarity. Also in claim 11, same objection for the word "a" in front of the term "length indicator" (line 6) and in front of the term "PDU Length Indicator" (line 8) should be changed to -- the -- for clarity.

Appropriate corrections are required.

### ***Double Patenting***

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

6. Claims 1-12 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-12 of copending Application No. 09/932459. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 and 12- are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abrol** (U.S.6,507,582) in view of **Chang et al.** (U.S.6,665,313).

- In regard to claims 1 and 12, **Abrol** discloses in Figs. 1-5 and in the respective portions of the specification about system and method for efficiently and reliably transmitting data using the enhanced radio link protocol ("radio link control"; For example see Abstract; col. 1, lines 7-11) retransmitting RLP frames ("PDU mode") through the wireless channel by eliminating the information component from the next PDU ('omitting data length field' or 'LEN'; For example see Figs. 1-2; col. 8, lines 22-30), but fails to explicitly disclose about the method of "checking whether the length indicator indicates the previous PDU ending at the end" as claimed in claimed invention 12. However, in order to determine the data length field may be omitted, if the length of data is indicated in other parts of the retransmit frame, it is obvious that the method of "checking" is provided. **Abrol** also fails to explicitly disclose about the information component

(‘*length of data*’) that indicates the current PDU size corresponds to the total size of components of the PDU. However, such implementation is known in the art.

For example, **Chang** discloses about the device and method for transmitting/receiving information frame in the radio link protocol; wherein the information frame comprises a plurality of consecutive multiplex frames (‘MuxPDU’), each includes a plurality of sub-multiplex frame with the services identifier, length indicator (“*LP*”) indicating the length of the transmission data, and data block (“*information component indicates total size of components of the PDU*”; For example see Figs. 5-8; Abstract; col. 15, lines 27-31; col. 15, line 62 through col. 16, line 21).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to combine the invention as taught by **Chang** into the **Abrol**’s data length field, with the motivation being to improve the effective data transmission for exchanging variable-length data in the radio environment as disclosed in **Chang**: col. 1, lines 20-22.

- Regarding claim 2, **Abrol** further discloses about the full-rate RLP frame (“*PDU*”) being placed into smaller non-full-rate RPL frames (“*SDU*”) with data length (“*LP*”) for retransmission (For example see Figs. 1-3; col. 6, lines 6-20; col. 7, line 62 through col. 7, line 12); and eliminating the information component from the next PDU (‘*omitting data length field*’ or ‘*LEN*’; For example see Figs. 1-2; col. 8, lines 22-30) as claimed in the claimed invention 6.

9. Claims 5-6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abrol** (U.S.6,507,582) in view of **ETSI EN 301 349 V.7.5.0 (2000-07)** [“Digital cellular Telecommunications System (Phase 2+); General Packet Data Service, Mobile Station-Base

Station System Interface; Radio link Control/Medium Access Control Protocol" GSM 04.60 version 7.5.0 Release 1998 (XP-002236190)].

- Regarding claims 5 and 6, **Abrol** discloses in Figs. 1-5 and in the respective portions of the specification about system and method for efficiently and reliably transmitting data using the enhanced radio link protocol ("radio link control"; For example see Abstract; col. 1, lines 7-11) retransmitting RLP frames ("PDUs") by being placed into smaller non-full-rate RPL frames ("SDUs"; wherein, the methods such as "*setting and comparing the PDU size*" with the total size of the RPL frames are obvious in placing the full-rate RPL frames into the smaller non-full-rate RPL frames) with data length ("LI") for retransmission through the wireless channel ('*omitting data length field*' or '*LEN*'; For example see Figs. 1-2; col. 8, lines 22-30), but fails to explicitly disclose about the method of "*determining and inputting the LI value for the last SDU if possible*". However, such implementation is known in the art.

For example, **ETSI EN 301 349 V.7.5.0 (2000-07)** discloses about the method for providing the use of the length indicator where the PDU does not end within the current RLC data block or where the PDU fits exactly into the RLC block so the length indicator can be omitted ("*determining and inputting the LI value for the last SDU if possible*"; For example see Figs. B.1-2 and Figs. B.5-6).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the invention as taught by **ETSI EN 301 349 V.7.5.0 (2000-07)** into the **Abrol's** RLP frames, with the motivation being to improve the reliability

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transmitting data and minimize the overhead inherent for the frames as disclosed in **Abrol**: col. 1, lines 7-11.

- In regard to claim 9, **Abrol** discloses in Figs. 1-5 and in the respective portions of the specification about system and method for efficiently and reliably transmitting data using the enhanced radio link protocol (“*radio link control*”; For example see Abstract; col. 1, lines 7-11) retransmitting RLP frames (“*PDU mode*”) through the wireless channel by placing the full-rate RLP frame (“*PDU*”) into smaller non-full-rate RPL frames (“*SDU*”) with header, sequence number (“prescribed sequence of bit pattern”; For example see Figs. 1-3; Table 1); data length (“*length indicator or LI*”) and data for retransmission (For example see Figs. 1-3; col. 6, lines 6-20; col. 7, line 62 through col. 7, line 12); but fails to explicitly disclose about the data length when the previous PDU header “*did not contain complete length of the SDUs in the previous PDU*” or where the RPL frame does not contain or omitted the data length “*indicates the end of the SDU in the previous PDU if the previous PDU ends exactly with a last segment of the SDU*”. However, such implementation is known in the art.

For example, **ETSI EN 301 349 V.7.5.0 (2000-07)** discloses about the extended use of the length indicator where the PDU does not end within the current RLC data block (“*when the previous PDU header did not contain complete length of the SDUs in the previous PDU*”; For example see Figs. B.1-2) and where the PDU fits exactly into the RLC block so the length indicator can be omitted (“*omitted the length indicator*”; For example see Figs. B.5-6).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the invention as taught by **ETSI EN 301 349 V.7.5.0**

(2000-07) into the **Abrol**'s RLP frames, with the motivation being to improve the reliably transmitting data and minimize the overhead inherent for the frames as disclosed in **Abrol**: col. 1, lines 7-11.

- Regarding claim 10, **Abrol** discloses in Figs. 1-5 and in the respective portions of the specification about system and method for efficiently and reliably transmitting data using the enhanced radio link protocol ("radio link control"; For example see Abstract; col. 1, lines 7-11) retransmitting RLP frames ("PDU mode") through the wireless channel by placing the full-rate RLP frame ("PDU") into smaller non-full-rate RPL frames ("SDU") with header, sequence number ("prescribed sequence of bit pattern"; For example see Figs. 1-3; Table 1); data length ("length indicator or LI") and data for retransmission (For example see Figs. 1-3; col. 6, lines 6-20; col. 7, line 62 through col. 7, line 12; wherein the method such as "*forming the PDU from the plurality of SDUs*" is obvious at the receiving side of the wireless channel); but fails to explicitly disclose about the "*final segment of padding data length can have length of zero*" so the LI can be omitted. However, such implementation is known in the art.

For example, **ETSI EN 301 349 V.7.5.0 (2000-07)** discloses about the use of the length indicator where the final length indicator indicates for the final padding (For example see Fig. B.3) and where the PDU fits exactly into the RLC block so the length indicator can be omitted ("*omitted the length indicator*"; For example see Figs. Figs. B.1-2 and B.5-6).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the invention as taught by **ETSI EN 301 349 V.7.5.0 (2000-07)** into the **Abrol**'s RLP frames, with the motivation being to improve the reliably

transmitting data and minimize the overhead inherent for the frames as disclosed in **Abrol**: col. 1, lines 7-11.

***Allowable Subject Matter***

10. Claims 3-4 and 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under Double Patenting and Objection, set forth in this Office action.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Chang et al.** (U.S.6,665,313), **Ahmadvand et al.** (U.S.6,542,490) and **Sipola** (U.S.2004/0114565) are all cited to show devices and methods for improving the exchange data in the radio link protocol of the mobile communication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078.

**Any response to this action should be mailed to:**

**Commissioner of Patents and Trademarks**

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan  
January 24, 2005



BRIAN NGUYEN  
PRIMARY EXAMINER